

## Certain properties of the essential spectra in Banach spaces

L. N. Muhati, J. O. Bonyo and J. O. Agure

### Abstract

Let  $X$  be an arbitrary Banach space, and  $L(X)$  be the set of all bounded linear operators on  $X$ . We apply closed range theorem to determine some duality properties of the essential spectrum on  $L(X)$ . Specifically, we introduce different parts of the essential spectrum and establish their duality relations. Moreover, we look at certain algebraic properties of the essential spectra on Banach spaces. Mathematics Subject Classification (2010). Primary 47A10; Secondary 47A05, 47A53.

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